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Experimental inoculation of calves with atypical Hobi-like pestivirus shows pattern similar to BVDV-1.

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Newly emerging pestiviruses, detected first as containment of cell culture fluids originated from Brazil and named Hobi-like are becoming a concern for diagnostic labs, vaccine producers and for BVDV control and eradication programs. The epidemiology of the virus is not known, however recent studies show that the viruses which were thought to be restricted to South America and Southeast Asia, may have reached other continents, including Europe. The pathogenesis of the infection with Hobi-like viruses has not yet been fully elucidated. The purpose of our study was to investigate the course of experimental inoculation of European cattle with atypical pestivirus. The experiment included 4 groups of 5 calves each inoculated with: BVDV-1 (Ho916), Hobi-like pestivirus (Th/04_KhonKaen), a mixture of both viruses or EaglesMEM (control animals). Th/04_KhonKaen induced milder clinical signs than observed in BVDV-1 inoculated calves including moderate pyrexia on day 7-9 post inoculation (PID) and slight depression, cough, conjunctivitis, mucous to mucopurulent ocular and nasal discharge PID 5 and 21. In the group inoculated with Hobi-like virus, similarly to BVDV-1, the decrease in the number of leucocytes, lymphocytes and granulocytes in blood on PID 2 correlated to the onset of viraemia. Animals started to seroconvert on PID 14, however the level of anti-Th/04_KhonKaen antibodies was significantly lower than the level of anti-BVDV-1 antibodies, probably due to the specificity of the test used. The experiment has shown that Hobi-like viruses share similar to BVDV-1 clinical pattern inducing rather subclinical disease with apparent immunosuppression of the host.

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